70-03-Corporate Application Development and Support

Fund/Agency: 001/70	Department of Information Technology
Personnel Services	$6,274,099
Operating Expenses	$2,007,963
Recovered Costs	($137,700)
Capital Equipment	$0
Total CAPS Cost:	**$8,144,362**
Federal Revenue	$0
State Revenue	$0
User Fee Revenue	$0
Other Revenue	$0
Total Revenue:	**$0**
Net CAPS Cost:	**$8,144,362**
Positions/SYE involved in the delivery of this CAPS	98/98

CAPS Percentage of Agency Total

- 20.2% Corporate Application Development and Support
- 79.8% All Other Agency CAPS

▶ CAPS Summary

The Corporate Application Development and Support Service in the Department of Information Technology (DIT) continues to support the core operations of the County by developing, implementing, and maintaining over 70 computer applications. There have been major changes in the work of this Program during the last four years. Prior to 1997, most of the applications supported were mainframe based and considered 'legacy'. These were the traditional, mainstream, mission-critical and enterprise-level systems that supported the operation of government. Since 1997, the activities of the program have been focused on making numerous changes to the systems resulting from State and Federal mandates, Y2K, agency business process improvement initiatives, and migrating these systems to newer technologies resulting from projects in the technology investment program (Fund 104). This program is currently directing additional focus on modernizing the existing legacy systems to promote the e-government capabilities, providing transactions through the Internet 24 hours a day seven days a week.

Basic Functions

The County's computer applications support is highly effective. The systems are stable, perform reliably, and meet the basic mission requirements of the agencies supported. Approximately 98 positions under this CAPS ensure that applications providing services for public health and safety, human services, taxation, and land planning and development functions are accessible to facilitate the transaction of County business. In addition, applications required to perform corporate administrative and management functions such as finance and accounting, budget, purchasing, payroll and human resource management, and facilities management are also supported. With an average of about one staff year equivalent per system, it is imperative to keep these systems in optimum operational order and minimize the level of maintenance required. Staff needs to have sufficient depth of knowledge about the software architecture of each application and the business of the user agency to provide quality support. Staff provides services ranging from planning and coordinating major projects, to application system configuration management, software acceptance testing, documentation and training, and systems implementation planning, maintenance and enhancements. They also evaluate business process impacts, assist in resolving problems and reviewing alternatives. Staff coordinates all application issues affecting vendors and users, especially for Commercial-Off-The-Shelf (COTS) software.

Exploring Improved Methods

The Corporate Application Development and Support Service CAPS seeks to optimize the Department of Information Technology through implementation of improved service delivery methods. The goal is to provide the application development services that fit the agencies' needs and are most appropriate to the prevailing business and technical circumstances. Staff are actively involved in researching new software tools that refresh and extend the useful life of some of the mainframe based legacy applications that continue to provide good service for the agency. Such tools facilitate the development of improved user screens using windows type graphical user interfaces, workflow and data extension middleware software and report writing tools that allow agency staff to improve the process flow of work from station to station and to analyze their own data. Staff is also heavily involved in development and technical review of numerous RFP documents that support projects in Fund 104, including Athletic Fields Scheduling, Fast Transit Routing, Alarm System, Storage Area Network and Fleet Management. Staff is also being trained on web-enabling technology so that the traditional systems can be accessed through the web. Some highlighted activities in the CAPS include:

- **In-house application development primarily by County staff** such as the web-based inquiry portion of the Human Services Resource Services and the Victim-Witness System, an Adoptions System for Circuit Court, development of a Court Services Court Appointed Attorney system to appoint and pay attorneys, and a warning ticket process and system for the Police Department. The initiation of a conversion of the Loan Payment System from out-moded software to the County's standard is also in progress.

- **Major In-house application enhancements primarily by County staff** as a result of Board actions, legal requirements or State mandates were completed on several systems. Personnel Resources Information System (PRISM) is a real-time personnel system used by the County of Fairfax. Major enhancements completed included significant changes to both the PRISM and Time reporting modules and the Personnel Budgeting system related to Pay for Performance, new pay scales, and the addition of a new health plan. The initial investigation of the Multi-State Tax withholding process is also underway. The Financial Management Information System (FAMIS) is a real-time accounting system that is used by both the County of Fairfax and Fairfax County Public Schools with one set of software and two separate databases. Included within the FAMIS support arena are a Budget Preparations System, a Fixed Assets Accounting and Control System, and a Loan Processing System. The major projects completed included a purge process of dated information and the creation of FAMIS data warehouse for the Fairfax County Public Schools. The County and Schools Procurement System (CASPS) is a the real-time procurement system that is used by both the County of Fairfax and Fairfax County Public Schools with one set of software and two separate databases. Major projects completed include a purge process of dated information and modifications for CASPS to be interactive with an updated version of FAMIS.

- **Major tax enhancements** over the past two years have included modifications required by the Personal Property Tax Relief Act (PPTRA), Y2K date change programming, and support of a variety of customer service initiatives enabling public access to real estate tax information via the Internet.

- **Selection of commercial-off-the-shelf (COTS) software applications** through the request for proposal (RFP) process using a mix of DIT and agency staff for evaluation, contract management and implementation. This method was used for the Fire and Rescue Telestaff application and the Customer Relationship Management (CRM) IQ software. The CRM IQ software is used by several agencies, including the Board of Supervisors, to track issues, correspondence, complaints and events pertinent to providing answers to our constituents. Joint IT and agency selection of COTS applications was also used to build SYNAPS, a system for the Community Services Board that includes treatment and planning modules. This process was also used to implement an automated "Cashier For Windows" cashiering system primarily for the Department of Tax Administration.

- **County staff integration of vendor COTS, hardware, and County-developed software into a comprehensive system**, such as Positive Identification, including live scan fingerprinting and digital photos for the Police Department and Sheriff's Office. installation of both the Cashier for Windows, an automated cashiering system and Harmony, a system for the Benefits and Services programs of the Department of Family Services included interfacing with tax systems and financial system respectively.

- **Conversions or Interfaces to State of Virginia applications** for the General District Court and Employment Training Services in the State Department of Social Services. The Criminal and Traffic application system supplements the Case Management System (CMS) for the Supreme Court. A project to upload Fairfax County data on a regular basis from the State's social services system is used to generate statistics and management reports on a local level.

- **Custom developed software with the use of contractors**, such as the Zoning and Planning System, LDSNet, the Plans and Waivers system, support the implementation of a contractor-developed Parking Ticket System and modifications to the Human Resources system including the Pay for Performance module. The Complaint Tracking System (IQ) integrated a web-based consumer complaint form and complaint history used by the Department of Cable Communications and Consumer Protection.

Using the Internet

Significant improvements in County services have resulted from using the Internet to improve access to information. Staff has recently developed applications including:

- Citizen access to the Department of Tax Administration assessments and the ability for citizens to query parcels assessments;

- LDSNet and the Land Development Service (Building Code Division) Online;

- The Sheriff's Inmate Programs, a fully functional web-based application; and

- Resource Services System on the Internet giving citizens the ability to query services available to County residences.

Many applications provide access to information on the Internet or Kiosk and via the Interactive Voice Response system. For more detailed information, please refer to the e-government CAPS.

Links with Other Governments

Both the Federal and State governments mandate that Fairfax County provide information to numerous Federal and State agencies and databases. The Corporate Application Development and Support Service staff works with the agencies to fulfill these requirements, primarily in the public safety and human resources areas. Among the many recent examples of these activities are:

- Update of the Virginia Compensation Board's Local Inmate Data System (LIDS) database from the Sheriff's Adult Detention Center Information System (ADCIS) to ensure correct prisoner reimbursements from the State;

- Update of the Virginia Crime Information Network (VCIN) and subsequently the Federal National Crime Information Center (NCIC) from the supported Police Records Management System (PRMS) consisting of numerous databases to enable accurate queries by other law enforcement jurisdictions;

- Provision of mandated Incident-Based Reporting (IBR) statistics to the State Police also from PRMS;

- Comprehensive Services Act (CSA) which covers data and reporting requirements in both the Community Services Board system and the Department of Family Services system for at-risk youth and families;

- Harmony, a Human Services client contract spending system that tracks benefits to clients and payments to vendors in order to recoup funds from the State; and

- Modifications to the Personal Property Tax system required by Governor Gilmore's Personal Property Tax Relief Act;

Electronic Government

E-government initiatives, particularly in the areas of taxes and land planning and development, are expanding to include ever-increasing access to data that formerly was only available by visiting or calling a government office during normal hours of operation. Where legally feasible, access to data in the human services and public health and safety areas will also be made available to our citizens. Maintaining the balance between confidentiality, including HIPAA mandates, and accessibility as the concept of "government without boundaries" is implemented is one of this CAPS more important challenges.

Most of our initiatives have focused on expanding 24/7 access to our constituents and those who serve them. Implementation of the constituent tracking system began in January 1999 with the Board of Supervisors and has continued to expand to other agencies. The constituent tracking system is also used for Complaint Investigations and Licensing and Permitting processes in the Department of Cable Communications and Consumer Protection. Other add-on modules include the Legislative Monitor, customized for Fairfax County's need to respond to pending legislation and the Taxicab Add-In for all taxicab certificates issued by the County. E-government initiatives particularly in the tax area and the land planning and development areas, are expanding to include ever increasing access to data that citizens would otherwise have to either visit or call a government office.

Other Accomplishments

A significant undertaking including modifying numerous applications, some extensively, to ensure successful and continuing Y2K processing occurred in calendar year 2000. This effort resulted in outstanding success and the County did not experience any Y2K software problems. This CAPS was responsible for most Y2K software support for County systems.

This CAPS has made an intensive effort over the last two years to develop and establish improved procedures and documentation. Chief among these are the Application Life Cycle Standards (ALCS), a complete set of procedures and documents to guide the professional staff in either developing applications or acquiring and implementing COTS software, and the automated call entry and change management software (implemented in cooperation with the Enterprise Technology Services CAPS) to standardize the reporting, allocation of resources and responses to application problems. The initiation of a formalized change management process for all applications is also in progress. These endeavors are aimed at improving the CAPS responses to ever changing requirements and technologies, and ensuring appropriate, accurate and timely responses to supported agencies.

This CAPS is also in the second year of a two year project to replace old database applications using Integrated Data Management System (IDMS) with modern, improved applications either by COTS acquisition or development. Generic report writer products will also replace our legacy report writing tool, On-Line Query (OLQ). This project will also improve the underlying database infrastructure.

New Initiatives

Initiatives for the coming year include a comprehensive, integrated permitting system, which will consolidate the inspection workflow processes across several agencies, a Complaint Tracking system and an Address Data Mart for the Land Planning and Developing businesses. In addition, an in-house replacement system for the Adult Detention Center Information System and an Interpreter systems for the Courts are being developed.

A two-year redesign project for the Resource Services System that will be entirely web-based is scheduled for completion in April 2002. The database design is complete and data scrubbing by the users continues. Window design and program coding are in progress. A redesign of the Urban Development Information System (UDIS) is also underway. One goal for this system is to be more integrated with the geographic and tax information. SYNAPS, the Community Services Board system, will be converted to Oracle in order that it may more fully comply with the HIPAA requirements.

Initiatives for the Personnel Information System (PRISM) include a Multi-State Tax withholding process, a new Savings Bond plan, new garnishment deduction process, and modification to deferred compensation. The Financial information system (FAMIS) initiatives include the completion of the Loan Payment System conversion and the replacement of the reporting package for all of the financial systems. The procurement information system (CASPS) initiatives include completion of the Change Management process and the requirement analysis for P-Card Processing. A replacement Fleet management system is scheduled to be implemented. Investigation into web enablement for PRISM, FAMIS and CASPS, and several public safety applications will also be initiated.

One of the latest projects for this CAPS is the implementation of a complete library automation system (Taos) including circulation, cataloging, acquisitions and serial modules. There are also plans to populate the Archibus system with information on lease management, real property management, parking and space management at the Adult Detention Center and Government Center, as well as systems furniture and cabling inventory. The Library's use of the facility scheduling application (Scheduler Plus) is used to schedule meeting rooms, conference rooms and common areas, and will be available to the public within the next fiscal year. Another initiative is the enhancement of existing software in the Office of Public Affairs to manage press releases and improve geographic information, particularly Home Owners' Association data, which will also be available to IQ users.

Staff will continue to collaborate with the Courts, the Office of the Sheriff and the Department of Public Works and Environmental Services to ensure the Courthouse expansion project results in a modern technology Courthouse.

Several imaging systems for a variety of agencies, including one for archival information or box management, are planned. This CAPS will provide expert assistance, contract and project management and staff resources to ensure these projects are implemented according to standards.

Trends

The trend for application development is to increase efforts to facilitate more of the major systems to be web-enabled and participate in the e-government program through a variety of technologies including the Internet and Interactive Voice Response, and, update the underlying technology in the legacy systems. Making the information more accessible places a higher demand to retain and train skilled staff who can manage both operational support and the new technologies needed to improve the interactions between the County government and the public.

Future Challenges

- The most critical challenge facing information technology providers remains keeping up with the pace of change and using new tools effectively to meet end-user requirements and expectations. Advances in technology can enable the workforce to provide better and faster service at a reduced cost. However, new technology itself can be costly and complex, so it must be adopted carefully and integrated wisely into the existing technology infrastructure of an organization.

- Over the past several years, a number of applications have been replaced, enhanced, and/or augmented with new technology to better serve the citizens of Fairfax County. Some of our legacy systems have been replaced with client server applications that promote data sharing. Some legacy systems, as well as new applications, now have web-enabled functionality that facilitates direct service to customers through the Internet. This trend will continue as the County moves forward into the 21st century. The challenge is to provide this new technology as rapidly as resources allow, while differentiating, as much as possible, between long-term viable technologies and those that may not withstand the test of time.

- The application of technology to business processes creates opportunities to analyze and improve them to enhance the efficiency and effectiveness of the organization. Over the next five years, DIT will continue to provide leadership and expertise to assist our customers in analyzing business processes for continuous improvement of operations. To support these efforts, DIT will develop appropriate countywide policies, plans and procedures to ensure the efficient utilization of technology.

- Increasing the accessibility of County government to citizens and businesses demands that we have staff that can manage both operational support and the new technologies. To accomplish this, we have to retain and train skilled staff. Training and re-skilling has to occur continuously to keep up with the rapid pace of technological change. This constant demand for keeping staff current in a world of constantly changing and improving technologies challenges the traditional primacy of instructor-led classroom training. Efficient, cost effective Technology-Based-Training (TBT) allows employees to learn at their own pace, at times that are convenient to them and with minimal disruption to the staffing requirements of the workplace.

  DIT will work to bring these benefits to Fairfax County by focusing primarily on e-learning technology as a means for delivering corporate-level business information systems training to County employees. E-learning is an end-to-end, technology-based, knowledge solution for providing training over the County's Infoweb. It can be used as a stand-alone delivery method or integrated with instructor-led classroom training to provide a "blended learning" approach. Additionally, DIT will employ other methods of technology-based training (TBT) such as distance learning and computer-based training. TBT initiatives will transform the way County employees obtain the knowledge, skills and abilities required for performing their job functions.

There have been major changes in this CAPS during the past four years. To support citizen's demands for improved customer service from County agencies, the Corporate Application and Support CAPS has responded with systems that provide on-line data to the community. With the advent and expansion of public access technologies, such as the Internet, Kiosk and Interactive Voice Response system, it has become imperative to serve our customers by connecting what were once purely internal systems to the outside world. Public access is becoming the daily work of this CAPS.

▶ Method of Service Provision

This CAPS is supported directly by County staff assigned to DIT, augmented by outside consulting assistance as well as for temporary staff supervised by County Staff for assistance with large projects.

It should be noted that many of the services that are provided to citizens and other County agencies are available 24 hours a day, 7 days a week. DIT staff works normal Monday through Friday business hours, but must be available for operational support of applications on nights and weekends, and during special periods of activity. The necessity for working outside and often in addition to normal hours is especially true within the Public Safety and other areas that require 24/7 operations of IT applications. This is also the case with the growing public access/Internet applications.

▶ Performance/Workload Related Data

Title	FY 1998 Actual	FY 1999 Actual	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate
Number of Change Requests for production systems	505	707	953	1,889	1,900
Number of Minor Projects	37	39	39	70	105
Number of Major Projects	23	41	65	61	57